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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,392	01/12/2001	Keith A. Lowery	066241.0110	1634

7590 03/07/2005
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EXAMINER

WON, MICHAEL YOUNG

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental Office Action Summary	Application No. 09/759,392	Applicant(s) LOWERY ET AL.	
	Examiner Michael Y Won	Art Unit 2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-22 and 26-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-22 and 26-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 2-5 and 23-25 have been cancelled.
2. Claims 1, 6-9, 18, 22, 26-27, 31, 34, 38, 41 and 44-45 have been amended.
3. Claims 1, 6-22, and 26-45 have been examined and are pending with this action.

Allowable Subject Matter

4. The indicated allowability of claims 18 and 34 are withdrawn in view of the newly considered reference(s) to Boyle (US 5,864,854 A) and Major (US 6,542,967 B1). Rejections based on the newly considered reference(s) are discussed below. The applicant acts as his or her own lexicographer and defines a term "Internet Cache Synchronization Protocol", however Major teaches this limitation as consistent with the description provided in the specification on page 19, lines 2-22.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims rejected under 35 U.S.C. 102(b) as being anticipated by Boyle (US 5,864,854 A).

INDEPENDENT:

As per claims 1, 6-14, 19-22, 26-30, and 35-45, Boyle teaches a method and system comprising means for community data caching comprising: a computer readable memory (see col.3, lines 4-8); an application stored in the computer readable memory and operable to perform the method (see col.3, lines 4-9) of: generating a cache community, the cache community having a plurality of cache shares (see col.1, line 66 to col.2, line 14), each cache share associated with one or more locator identifiers (see Fig.2 and col.3, line 58 to col.4, line 17); establishing a primary distribution of the plurality of cache shares using the locator identifiers, the primary distribution indicating a first allocation of the plurality of cache shares among a plurality of clients (see Fig.5, steps 106-112; col.3, lines 21-30; and col.6, lines 40-51); establishing a secondary distribution of the plurality of cache shares using the locator identifier, the secondary distribution indicating a second allocation of the plurality of cache shares among the clients to be used in place of the primary distribution in response to a trigger occurrence (see Fig.5, steps 106, 120, 124, 106 (again)-112; and col.6, line 59 to col.7, line 17); intercepting a request for content at a cache module (inherent: see col.3, lines 38-41); determining a cache share responsible for the request (see col.3, lines 24-30 and col.6, lines 40-51), the cache share being associated with the cache community (see col.2, lines 37-40); determining whether the content associated with the request is available at the cache share (see col.3, lines 24-26); retrieving the content associated with the

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request from the cache share when the content associated with the request is available at the cache share (see col.3, lines 26-30); and retrieving the content associated with the request from an origin server when the content associated with the request is unavailable at the cache share (see col.6, lines 63-65) and storing the content associated with the request retrieved from the origin server at the cache share (see col.3, lines 9-13 and col.4, lines 23-24).

As per claims 38, 41, and 45, Boyle teaches a method and a system comprising means for community data caching comprising: a computer readable memory (see col.3, lines 4-8); an application stored in the computer readable memory and operable to perform the method (see col.3, lines 4-9) of: generating a cache community, the cache community having a plurality of cache shares (see col.1, line 66 to col.2, line 14), each cache share associated with one or more locator identifiers (see Fig.2 and col.3, line 58 to col.4, line 17); establishing a primary distribution of the plurality of cache shares using the locator identifiers, the primary distribution indicating a first allocation of the plurality of cache shares among a plurality of clients (see Fig.5, steps 106-112; col.3, lines 21-30; and col.6, lines 40-51); establishing a secondary distribution of the plurality of cache shares using the locator identifier, the secondary distribution indicating a second allocation of the plurality of cache shares among the clients to be used in place of the primary distribution in response to a trigger occurrence (see Fig.5, steps 106, 120, 124, 106 (again)-112; and col.6, line 59 to col.7, line 17); intercepting a request for content at a cache module (inherent: see col.3, lines 38-41), the cache module having an associated resource limit (inherent: memory is always limited);

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determining the resource limit associated with the cache module in response to an incentive (see col.5, lines 58-64); determining a cache share responsible for the request (see col.3, lines 24-30 and col.6, lines 40-51), the cache share being associated with the cache community (see col.2, lines 37-40); determining whether the content associated with the request is available at the cache share (see col.3, lines 24-26); retrieving the content associated with the request from the cache share when the content associated with the request is available at the cache share (see col.3, lines 26-30); and retrieving the content associated with the request from an origin server when the content associated with the request is unavailable at the cache share (see col.6, lines 63-65) and storing the content associated with the request retrieved from the origin server at the cache share (see col.3, lines 9-13 and col.4, lines 23-24).

DEPENDENT:

As per claims 6 and 7, Boyle further teaches wherein the cache shares respectively comprise a plurality of Internet domain names (see Fig.1, #12 and col.1, line 10: "World Wide Web") starting with selected letters of the English alphabet (inherent).

As per claims 8 and 26, Boyle further teaches wherein each cache share respectively comprises a set of Internet domain names (see col.9, lines 31-32 and claim 6 rejection above).

As per claims 9 and 27, Boyle further teaches wherein each cache share respectively comprises a plurality of content items associated with requests to be

cached at a particular client associated with the cache community (see col.5, lines 28-57).

As per claims 10 and 29, Boyle teaches of further comprising generating the request at a first client associated with the cache community (see col.3, lines 15-30), the cache community comprising the first client and a plurality of second clients distinct from the first client (see Fig.1, #34).

As per claims 11 and 30, Boyle further teaches wherein determining a cache share responsible for the request comprises: comparing the request to a location table associated with the cache module, the location table associating each cache share with a cache location, each cache location comprising a selected one of the second clients; and determining which location is associated with the request in response to the comparison (see Fig.2 and col.3, lines 24-30: "group cache look-up table").

As per claims 12 and 28, Boyle teaches of further comprising collecting statistical information at the cache module, the statistical information being associated with a client associated with the cache module (see Fig.3 and col.4, lines 38-50).

As per claim 13, Boyle teaches of further comprising determining a resource limit associated with the cache module (see col.5, lines 58-64).

As per claims 14, 39, and 42, Boyle further teaches wherein the resource limit comprises a percentage of resource associated with a client associated with the cache module and wherein the resource comprises any item selected from the group consisting essentially of processor time, bandwidth, storage space and memory associated with the client (see col.4, lines 43-67).

As per claims 19 and 35, Boyle teaches of further comprising determining whether the origin server is unable to provide the content associated with the request (see col.1, lines 9-15); attempting to retrieve the content associated with the request from the origin server until the origin server is able to provide the content associated with the request (see col.1, lines 18-19); and retrieving content associated with request when the server is able to provide the content associated with the request (inherent).

As per claims 20 and 36, Boyle further teaches wherein determining whether the origin server unable provide the content comprises determining whether the origin server is busy (implicit: see col.1, lines 9-20).

As per claims 21 and 37, Boyle further teaches wherein attempting retrieve content is performed in the background (see col., lines 40-44).

As per claims 40 and 43, Boyle further teaches wherein the incentive comprises financial incentive (implicit: see col.1, lines 23-25: "expensive").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-18 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyle (US 5,864,854 A) in view of Major (US 6,542,967 B1).

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As per claims 15, 16, 31, and 32, Boyle does not explicitly teaches of further comprising storing content marked as cacheable at the cache module and storing content unless the content is marked as non-cacheable at the cache module. Major teaches of storing content marked as cacheable at the cache module and storing content unless the content is marked as non-cacheable at the cache module (see col.7, lines 19-24). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Major within the systems of Boyle by implementing storing content marked as cacheable at the cache module and storing content unless the content is marked as non-cacheable at the cache module within the community data caching method and system because such an implementation would save processing time by not attempting to save the content and by also saving memory.

As per claims 17 and 33, Boyle does not explicitly teach of further comprising expiring content stored at the cache module using a content expiration protocol. Major teaches of expiring content stored at the cache module using a content expiration protocol (see col.6, lines 35-41 and col.7, lines 14-18). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Major within the systems of Boyle by implementing comprising expiring content stored at the cache module using a content expiration protocol within the community data caching method and system because such an implementation avoids old and stale data thereby providing the requester with the most currently available information at the source.

As per claims 18 and 34, Boyle teaches a method and system for community data caching comprising: intercepting a request for the content at the cache module (see col.3, lines 38-41); determining a cache share responsible for the request (see col.3, lines 24-30 and col.6, lines 40-51), the cache share being associated with the cache community (see col.2, lines 37-40); determining whether the content associated with the request is available at the cache share (see col.3, lines 24-26); retrieving the content associated with the request from the cache share when the content associated with the request is available at the cache share (see col.3, lines 26-30); and retrieving the content associated with the request from an origin server when the content associated with the request is unavailable at the cache share (see col.6, lines 63-65) and storing the content associated with the request retrieved from the origin server at the cache share (see col.3, lines 9-13 and col.4, lines 23-24).

Boyle does not explicitly teach storing content marked as cacheable at the cache module and storing content unless the content is marked as non-cacheable at the cache module. Major teaches of storing content marked as cacheable at the cache module and storing content unless the content is marked as non-cacheable at the cache module (see claims 15, 16, 31, and 32 rejection above).

Boyle does not explicitly teach expiring content stored at the cache module using a content expiration protocol. Major teaches of expiring content stored at the cache module using a content expiration protocol (see claims 17 and 33 rejection above).

Boyle does not explicitly teach wherein the content expiration protocol comprises the Internet Cache Synchronization Protocol, however Major teaches all the limitations

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with respect to the description of an Internet Cache Synchronization Protocol (see claims 17 and 33 rejection above) as supported in the specification in that the protocol "ICSP message may expire any single web page, a plurality of web pages at single web site, a plurality of web pages at a plurality of web sites, plurality of sites within a single domain and one or more specific objects on a web page, such as an image" (see page 19, lines 6-11 of the specification).

Response to Arguments

7. In response to the arguments regarding claim 18 and 34, Major teaches of expiring contents in a cache by means of a "Time-To-Live (TTL) value". Clearly the specification regarding the definition of Internet Cache Synchronization Protocol teaches nothing more than such means as discussed above. Therefore, claims 18 and 34 have been newly rejected.

Applicant's arguments with respect to claims 1-11, 13, 19-27, 29, 30, 35-38, 40, 41, and 43-45 have been considered but are moot in view of the new ground(s) of rejection. Boyle teaches all the deficiencies of the previous reference Barish et al. recited in the amendment. Furthermore, Boyle also teaches all the deficiencies of the previous reference Wang recited in the amendment with respect to claims 12, 14, 28, 39, and 41.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections

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are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Major is primary relied upon to teach the missing element of “storing content marked as cacheable at the cache module and storing content unless the content is marked as non-cacheable at the cache module” and “expiring content stored at the cache module using a content expiration protocol”. All other elements of the claim are clearly taught by Boyle.

Conclusion

8. For the reason above, claims 1, 6-22, and 26-45 have been rejected and are pending with this action.

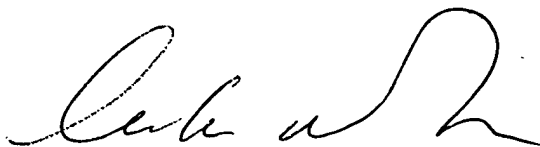
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Won



March 2, 2005



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SUPERVISOR, PATENT EXAMINER